

ICS 11.060.10

CCS C33



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 30367-2025

Dentistry - Ceramic materials

牙科学 陶瓷材料

Issued on: March 28, 2025

Implemented on: April 1, 2027

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
3.1 Materials	1
3.2 Processing technology	2
3.3 Performance	3
4 Types, classification and identification	3
5 Requirements	4
5.1 Uniformity	4
5.2 No foreign matter	4
5.3 Mixing and compaction properties of type I ceramics	4
5.4 Physical and chemical properties	5
5.5 Shrinkage factor	5
6 Sampling	5
6.1 Type I ceramics	5
6.2 Type II ceramics	5
7 Test methods	5
7.1 Sample preparation	5
7.1.1 General Principles	5
7.1.2 Sample composition (Type I ceramic)	5
7.1.3 Blending equipment	5
7.1.4 Blending method	6
7.1.5 Sample preparation process	6
7.1.6 Firing	6
7.2 Radioactivity of dental ceramics	6
7.2.1 Sample preparation	6
7.2.2 Counting Step	6
7.2.3 Result evaluation	6
7.3 Bending strength	6
7.3.1 General Principles	6
7.3.2 Three-point bending test and four-point bending test	7
7.3.3 Biaxial bending test (piston-three-ball test)	9

7.4 Linear expansion coefficient	11
7.4.1 Appliances	11
7.4.2 Sample preparation (Type I and Type II ceramics).....	11
7.4.3 Thermal expansion measurement	11
7.4.4 Result evaluation	12
7.5 Glass transition temperature	12
7.5.1 Operation steps	12
7.5.2 Result evaluation	12
7.6 Chemical solubility	12
7.6.1 Reagents	12
7.6.2 Appliances	12
7.6.3 Sample preparation	13
7.6.4 Test steps	13
7.6.5 Result calculation and evaluation	13
8 Information and instructions	13
8.1 Information	13
8.1.1 General	13
8.1.2 Type I ceramics	13
8.1.3 Type II ceramics	13
8.2 User Manual	14
9.1 Packaging	14
23 Reference	26

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB 30367-2013 "Dental ceramic materials". Compared with GB 30367-2013, except for structural adjustments and editorial In addition to the modifications, the main technical changes are as follows:

--- Changed the terms and definitions (see 3.1, 3.2, 3.3, 3.1, 3.2, 3.3 of the.2013 edition);

--- Changed the description of ceramic classification (see Table 1, Table A.1, Table 1, Table A.1 of the.2013 edition);

- Deleted "biocompatibility" in the requirements (see 5.5 of the.2013 edition);
- Added the requirements for the expression of "shrinkage factor" (see 5.5);
- Changed the description of sampling of porcelain powder with various colors (see 6.1, 6.1 of the.2003 edition);
- Deleted "When using gamma-spectroscopy technology, attention should be paid to eliminating interference" (see 7.2.2 of the.2013 edition);
- The measurable load range has been changed (see 7.3.2.1.1, 7.3.3.1.1, 7.3.2.1.1, 7.3.3.1.1 of the.2013 edition);
- Increased the accuracy of span measurement (see 7.3.2.1.2.1, 7.3.2.1.2.2);

1 Scope

GB 30367-2025 is the Chinese mandatory standard for dental ceramic materials, covering the feldspathic, glass-ceramic, zirconia and other ceramics from which crowns, bridges, veneers and implant abutments are made. Dental ceramics are held to requirements that few other ceramics face: they go into the body for years, they are loaded cyclically in a wet environment at temperatures that swing with every hot drink, and they must not release anything harmful while doing it. The standard sets the types, classification and designation, then the requirements: the uniformity of the material and freedom from foreign matter, the behaviour during mixing and compaction and through the firing cycle, the flexural strength, which is the property that determines where a ceramic may be used clinically, the chemical solubility, the linear thermal expansion coefficient and its compatibility with the substructure, the radioactivity, and the biocompatibility and the limits on the elements released. It then gives the test methods, the sampling and the marking, labelling and instructions for use. It is a GB standard without the recommended suffix: compliance is mandatory in China. It takes effect on 1 April 2027.

This document specifies requirements, recommendations and describes relevant test methods for dental ceramic materials. This document applies to ceramic materials for making dental fixed all-ceramic and metal-ceramic restorations and restorative devices.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This

document.

ISO 1942 Dentistry-Vocabulary

GB/T 9937-2020 Dental terminology (

ISO 1942:2009, MOD) and test methods)

GB/T 6682-2008 Specifications and test methods for water used in analytical laboratories (ISO 3696:1987, MOD)

ISO 13078 Dentistry - Dental furnace- Test method for temperature measurement using independent thermocouples ISO 13078-

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in ISO 1942 and the following apply. ISO and IEC maintain terminology databases used for standardization at the following URLs.

3.1 Materials

3.1.1 Dentin porcelain with a high intensity or saturation of hue (color).

3.1.2 Dental ceramics dental ceramic Ceramic materials used in the manufacture of dental prosthetic devices and restorations.